Digits

The `Digits` voice element captures a string of numerical digits. It may be used to collect small or large strings of digits. The digit string can be spoken or entered using the keypad. The captured value will be stored in element data as a string. The string cannot contain any non-numerical characters. Using speech input, the number is spoken one digit at a time (that is, 49678 is spoken *four nine six seven eight*). DTMF input can be terminated by a # keypress if desired (if not used, the entry is considered terminated when the input timeout has been reached).

With the Digits voice element, the application designer has the ability to set length restrictions on the digit string. A minimum and maximum length can be given to narrow the criteria. If a string of a specific length is required, the minimum and maximum lengths should be set to the same value. If fewer digits are entered, a nomatch event will be thrown. A string of digits with length greater than the maximum length cannot be entered.

Settings

Name (Label)	Type	Req'd	Single Setting Value	Substitution Allowed	Default	Notes
inputmode (Input Mode)	String enum	Yes	true	false	both	The type of entry allowed for input. Possible values are: voice | dtmf | both.
noinput_timeout (Noinput Timeout)	String	Yes	true	true	5s	The maximum time allowed for silence or no keypress before a noinput event is thrown. Possible values are standard time designations including both a non-negative number and a time unit, for example, 3s

						(for seconds) or 3000ms (for milliseconds). Default = 5s.
`max_noinput_count` (Digits Max NoInput Count)	int ≥ 0	Yes	`true`	`true`	3	The maximum number of noinput events allowed during digits input capture. 0 = infinite noinputs allowed.
`max_nomatch_count` (Digits Max NoMatch Count)	int ≥ 0	Yes	`true`	`true`	3	The maximum number of nomatch events allowed during digits input capture. 0 = infinite nomatches allowed.
`digits_confidence_level` (Digits Confidence Level)	Decimal (0.0 to 1.0)	Yes	`true`	`true`	0.40	The confidence level threshold to use during digits capture.
`min_digit` (Min Digits)	int > 0	Yes	`true`	`true`	*None*	Minimum number of digits allowed.
`max_digit` (Max Digits)	int ≥ 0	Yes	`true`	`true`	*None*	Maximum number of digits allowed.
`modal` (Disable Hotlinks)	Boolean	Yes	`true`	`true`	`false`	If set to true, only the grammars of the current Digits element will be enabled for the duration of the element. Otherwise all active grammars will be enabled.
`secure_logging` (Secure Logging)	Boolean	Yes	`true`	`true`	`false`	If set to true, user DTMF input for the element is considered secure and the attributes utterance, interpretation, value, nbestUtteranceX and nbestInterpretationX are masked in VXML server logs. The format used to render secure element attributes is to add a *_secureLogging* suffix. For example `nbestUtterance1_secureLogging,*****.`
`maxnbest` (Maxnbest)	int ≥ 1	Yes	`true`	`true`	1	The maximum number of speech recognition results that can be generated per voice input.
`dtmf_overlay` (DTMF Overlay)	Boolean	Yes	`true`	`true`	`false`	Setting this property to `true` will enable the generation of random DTMF digits tone at random duration while DTMF recognition is in progress.

						Note dtmf_overlay supports only the following VoiceXML Gateways, and one of these options must be selected before creating or deploying the Call Studio application. • Cisco DTMF • VoiceXML 2.1 Cisco DTMF
dtmf_overlay_interval (DTMF Overlay Interval)	String	Yes	true	true	1000ms	Time Interval (in ms) between the generation of two DTMF tones. The interval is a random number that is +/-25% of the duration that is mentioned. For example, if the duration mentioned is 1000ms, the interval will be between between 750ms and 1250ms. **Note** The duration mentioned must be between 500ms (minimum) and 2000ms (maximum).

Refer to the following Element Data table for information about nbestUtteranceX and nbestInterpretationX

Element Data

Name	Type	Notes
Value	string	The digit string value captured.
value_confidence	float	This is the confidence value of the captured utterance. When n-best recognition is enabled, this stores the confidence score of the top hypothesis in the n-best list.
nbestLength	int ≥ 1	This stores the number of n-best hypotheses generated by the speech engine.
nbestUtterance1 nbestUtterance2 … nbestUtteranceX	string	This set of element data stores the captured n-best utterances. While the maximum number of nbestUtteranceX values is equal to the maxnbest setting value, the actual number of these values available is determined by speech recognition at runtime, where nbestUtterance1 holds the utterance of the top hypothesis in the n-best list and nbestUtteranceX holds the utterance of the last hypothesis.
nbestInterpretation1 nbestInterpretation2	string	This set of element data stores the interpretations of captured n-best utterances. While the maximum number of nbestInterpretationX values

… nbestInterpretationX		is equal to the maxnbest setting value, the actual number of these values available is determined by speech recognition at runtime, where nbestInterpretation1 holds the interpretation of the top hypothesis in the n-best list and nbestInterpretationX holds the interpretation of the last hypothesis.
nbestConfidence1 nbestConfidence2 … nbestConfidenceX	float	This set of element data stores the confidence scores of captured n-best utterances. While the maximum number of nbestConfidenceX values is equal to the maxnbest setting value, the actual number of these values available is determined by speech recognition at runtime, where nbestConfidence1 holds the confidence score of the top hypothesis in the n-best list and nbestConfidenceX holds the confidence score of the last hypothesis.
nbestInputmode1 nbestInputmode2 … nbestInputmodeX	string	This set of element data stores the input modes of captured n-best utterances.

Exit States

Name	Notes
max_nomatch	The maximum number of nomatch events has occurred. If the nomatch max count is 0, this exit state will never occur.
max_noinput	The maximum number of noinput events has occurred. If the noinput max count is 0, this exit state will never occur.
done	The digit string capture was completed.

Audio Groups

Digits Capture

Name (Label)	Req'd	Max1	Notes
digits_initial_audio_group (Digits Initial)	Yes	Yes	Played when the voice element first begins.
digits_nomatch_audio_group (Digits NoMatch)	No	No	Played when a nomatch event occurs.
digits_noinput_audio_group	No	No	Played when a noinput event occurs.

(Digits NoInput)			
digits_help_audio_group (Digits Help)	No	No	Played when the caller asked for help. If not specified, help is treated as a nomatch by default.

End

Name (Label)	Req'd	Max1	Notes
done_audio_group (Done)	No	Yes	Played when the digits capture is completed and the voice element exits with the done exit state.

Folder and Class Information

Studio Element Folder Name	Class Name
Number Capture	com.audium.server.voiceElement.digit.MBasicDigit

Events

Name (Label)	Notes
Event Type	You can select **Java Exception**, **VXML Event**, or **Hotlink** as event handler for this element.